AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) ~~A~~ An isolated structural protein of adeno-associated virus 2, which comprises at least one mutation, wherein the mutated structural protein comprises one or more amino acid insertion(s) which bring(s) about an increase in the infectivity of AAV, wherein the one or more insertion(s) is/are located ~~before and/or after~~ directly adjacent to at least one amino acid in the sequence selected from the group consisting of YKQIS SQSGA (SEQ ID NO: 2), YLTLN NGSQA (SEQ ID NO: 3), YYLSR TNTPS (SEQ ID NO: 4), EEKFF PQSGV (SEQ ID NO: 5), NPVAT[[,]] EQYGS (SEQ ID NO: 6), LQRGN RQAAT (SEQ ID NO: 7), and NVDFT VDTNG (SEQ ID NO: 8), and wherein said mutated structural protein is capable of particle formation.

2-28. (Canceled)

29. (Previously presented) The structural protein of Claim 1, wherein the structural protein is VP3.

30. (Currently amended) The structural protein of Claim 29, wherein the ~~insertion is~~ one or more amino acid insertions are located after the amino acid "N" in SEQ ID NO: 7.

31. (Currently amended) The structural protein according to Claim 1, wherein the ~~mutated structural protein brings about~~ mutation causes a change in ~~an~~ interaction of the structural protein with a cell membrane receptor.

32. (Previously presented) The structural protein according to Claim 31, wherein the cell membrane receptor is a glycoprotein of about 150 kD and/or a heparan sulphate proteoglycan.

33-34. (Cancelled)

35. (Currently amended) The structural protein according to Claim 1, wherein the ~~insertion comprises~~ one or more amino acid insertions comprise at least one of a cell membrane receptor ligand, ~~either~~ a Rep protein or a Rep peptide, ~~either~~ or an immunosuppressive protein or an immunosuppressive peptide~~, and either a protein or a peptide having a signal for double-strand synthesis of the foreign gene~~.

36. (Currently amended) The structural protein according to Claim 35, wherein the ligand is selected from an integrin, a cytokine, a receptor-binding domain of a cytokine, a receptor-binding domain of an integrin, a receptor-binding domain of a growth factor, a single-chain antibody ~~binding~~ that binds to a cell surface receptor, an antibody against cell surface structures, an antibody-binding structure, an antibody-binding epitope, a ligand which binds via its charge, a ligand that binds via the type of amino acids, a ligand that binds via its specific glycosylation, or a ligand that binds via phosphorylation to cell surface molecules.

37. (Previously presented) The structural protein according to Claim 1, wherein the structural protein is a component of an AAV particle.

38. (Previously presented) The structural protein of Claim 37, wherein the structural protein is a component of an AAV capsid.

39. (Currently Amended) ~~A~~ An isolated nucleic acid coding for a structural protein of ~~Claim 1~~ of adeno-associated virus 2 comprising at least one mutation, wherein the mutated structural protein comprises one or more amino acid insertion(s) which bring(s) about an increase in the infectivity of AAV, wherein the one or more insertion(s) is/are located directly adjacent to at least one amino acid in a sequence selected from the group consisting of YKQIS SQSGA (SEQ ID NO: 2), YLTLN NGSQA (SEQ ID NO: 3), YYLSR TNTPS (SEQ ID NO: 4), EEKFF PQSGV (SEQ ID NO: 5), NPVAT EQYGS (SEQ ID NO: 6), LQRGN RQAAT (SEQ ID NO: 7), and NVDFT VDTNG (SEQ ID NO: 8), and wherein said mutated structural protein is capable of particle formation.

40. (Currently amended) ~~A~~ An isolated cell comprising a nucleic acid of Claim 39.

41. (Currently Amended) A process for the preparation of a mutated structural protein of adeno-associated virus 2 ~~Claim 1~~, the method comprising cultivating ~~wherein~~ a cell comprising a nucleic acid coding for a structural protein of adeno-associated virus 2 comprising at least one mutation, wherein the mutated structural protein comprises one or more amino acid insertion(s) which bring(s) about an increase in the infectivity of AAV, wherein the one or more insertion(s) is/are located directly adjacent to at least one amino acid in a sequence selected from the group consisting of YKQIS SQSGA (SEQ ID NO: 2), YLTLN NGSQA (SEQ ID NO: 3), YYLSR TNTPS (SEQ ID NO: 4), EEKFF PQSGV (SEQ ID NO: 5), NPVAT EQYGS (SEQ ID NO: 6), LQRGN RQAAT (SEQ ID NO: 7), and NVDFT VDTNG (SEQ ID NO: 8), and wherein said mutated structural protein is capable of particle formation; ~~according to Claim 40 is cultivated~~ and isolating the expressed mutated structural protein ~~is isolated~~.

42. (Currently Amended) A method for altering the tropism of AAV2, the method comprising cultivating ~~a~~ an isolated cell which comprises an AAV2 coding for a mutated structural protein of ~~Claim 1~~ wherein the mutated structural protein comprises one or more amino acid insertion(s) which bring(s) about an increase in the infectivity of AAV, wherein the one or more insertion(s) is/are located directly adjacent to at least one amino acid in a sequence selected from the group consisting of YKQIS SQSGA (SEQ ID NO: 2), YLTLN NGSQA (SEQ ID NO: 3), YYLSR TNTPS (SEQ ID NO: 4), EEKFF PQSGV (SEQ ID NO: 5), NPVAT EQYGS (SEQ ID NO: 6), LQRGN RQAAT (SEQ ID NO: 7), and NVDFT VDTNG (SEQ ID NO: 8), and wherein said mutated structural protein is capable of particle formation; and isolating the AAV2 particle produced by the cell.

43. (Currently amended) The ~~structural protein~~ isolated nucleic acid according to Claim [[1]] 39, wherein the one or more insertion(s) is/are located before and/or after at least one amino acid in the sequence LQRGN RQAAT (SEQ ID NO: 7).